



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,862	11/26/2002	Edward Demarest	DSC-02043	3385
31661	7590	06/30/2004	EXAMINER	
PROTON ENERGY SYSTEM			JACKSON, ANDRE K	
10 TECHNOLOGY DRIVE			ART UNIT	
WALLINGFORD, CT 06492			PAPER NUMBER	

2856

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/065,862	DEMAREST ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	André K. Jackson	2856	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) 5-7, 17-19 and 25-61 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-16 and 20-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of the species found in figure 5 in the reply filed on 06/07/04 is acknowledged.
2. Claims 25-61 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

Applicant has elected the species of figure 5 and contends claims 1-24 read on figure 5. However, claims 5-7 and 17-19 were not considered since the subject matter in those claims did not read on figure 5. For instance the claims require that the orifice be connected between the first separator outlet and the second separator inlet. Figure 5 shows the orifice placed between the sensor and the second separator.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior art shown in figure 1 in view of Amirav et al.

Regarding claim 1, the Prior art shown in figure 1 has a first separator (24), a second phase separator (28); a first combustible gas sensor (36) adjacent the second separator outlet and the first sensor being spaced a predetermined distance from the second separator outlet opening (Figure 1). The Prior art shown in figure 1 does not disclose where the second separator inlet is fluidly connected to the first separator outlet. However, Amirav et al. disclose in the patent entitled "Electrolyzer device for the operation of flame ionization detectors" where the second separator inlet is fluidly connected to the first separator outlet (connection between 39 and 32 Figure 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Prior art to include where the second separator inlet is fluidly connected to the first separator outlet. By adding this feature the apparatus would be able to fully measure the content of the gas.

Regarding claim 13, the Prior art shown in figure 1 has an electrochemical cell (18) has a first separator (24), a second phase separator (28); a first combustible gas sensor (36) adjacent the second separator outlet and the first sensor being spaced a predetermined distance from the second separator outlet opening (Figure 1). The Prior art shown in figure 1 does not disclose where the second separator inlet is

fluidly connected to the first separator outlet. However, Amirav et al. disclose where the second separator inlet being fluidly connected to the first separator outlet (connection between 39 and 32 Figure 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Prior art to include where the second separator inlet is fluidly connected to the first separator outlet. By adding this feature the apparatus would be able to fully measure the content of the gas.

5. Claims 2-4,8-12,14-16 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior art shown in figure 1 in view of Amirav et al. as applied to claims 1 and 13 above and in further view of Whynall et al.

Regarding claim 2, the Prior art shown in figure 1 does not disclose an air movement device arranged to move air between the second separator outlet opening and the first sensor. However, Whynall et al. disclose in the patent entitled "Monitoring system" an air movement device (24) arranged to move air between the second separator outlet (30) opening and the first sensor (32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Prior art shown in figure 1 to include an air movement device arranged to move air between the second separator outlet opening and

the first sensor. By adding this feature the apparatus would be able to advance the air for a more efficient measurement.

Regarding claim 3, the Prior art shown in figure 1 discloses where the sensor includes a sensing surface and is arranged where the sensor surface is perpendicular to the second separator (Figure 1).

Regarding claim 4, the Prior art shown in figure 1 does not disclose an air movement device arranged to move air in a direction parallel to the sensing surface. However, Whynall et al. disclose an air movement device arranged to move air in a direction parallel to the sensing surface. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Prior art shown in figure 1 to include an air movement device arranged to move air in a direction parallel to the sensing surface. By adding this feature the apparatus would be able to advance the air for a more efficient measurement.

Regarding claim 8, the Prior art discloses where the second separator outlet opening is separated from the second separator conduit (34).

Regarding claim 9, the Prior art discloses an orifice coupled to the conduit arranged between the second separator and the outlet opening (40).

Regarding claim 10, the Prior art discloses where the second phase separator includes a valve arranged to drain water from the second separator (30).

Regarding claim 11, the Prior art shown in figure 1 does not disclose where the orifice has an opening of less than 0.025 inches. However, it is considered a design choice and clearly within the purview of the skilled artisan to provide an orifice opening to accommodate the need of the instrument's size and pressure needs.

Regarding claim 12, the Prior art shown in figure 1 discloses a coalescing filter.

Regarding claim 14, the Prior art shown in figure 1 does not disclose an air movement device arranged to move air between the second separator outlet opening and the first sensor. However, Whynall et al. disclose an air movement device (24) arranged to move air between the second separator outlet (30) opening and the first sensor (32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Prior art shown in figure 1 to include an air movement device arranged to move air between the second separator outlet opening and the first sensor. By adding this feature the apparatus would be able to advance the air for a more efficient measurement.

Regarding claim 15, the Prior art shown in figure 1 discloses where the sensor includes a sensing surface and is arranged where the sensor surface is perpendicular to the second separator (Figure 1).

Regarding claim 16, the Prior art shown in figure 1 does not disclose an air movement device arranged to move air in a direction parallel to the sensing surface. However, Whynall et al. disclose an air movement device arranged to move air in a direction parallel to the sensing surface. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Prior art shown in figure 1 to include an air movement device arranged to move air in a direction parallel to the sensing surface. By adding this feature the apparatus would be able to advance the air for a more efficient measurement.

Regarding claim 20, the Prior art discloses where the second separator outlet opening is separated from the second separator conduit (34).

Regarding claim 21, the Prior art discloses an orifice coupled to the conduit arranged between the second separator and the outlet opening (40).

Regarding claim 22, the Prior art discloses where the second phase separator includes a valve arranged to drain water from the second separator (30).




Regarding claim 23, the Prior art shown in figure 1 does not disclose where the orifice is sized to reduce the gas pressure to atmospheric pressure. However, it is considered a design choice and clearly within the purview of the skilled artisan to provide an orifice opening to accommodate the need of the instrument's size and pressure needs.


Regarding claim 24, the Prior art shown in figure 1 discloses a coalescing filter.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to André K. Jackson whose telephone number is (571) 272-2196. The examiner can normally be reached on Mon.-Thurs. 7AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.J.   
June 25, 2004

  
HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800